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On the Propositions of the Associaton of Superintendents of American Hospitals for the Insane.

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Art. IV.—On the Propositions of the Association of Superintendents of American Hospitals for the Insane.

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THE principles which underlie the arrangement and construction of a hospital for the insane are founded on the dictates of sound, rational common sense, and the results of experience obtained by residence in such buildings, and derived from the careful study of the requirements of the peculiar class of persons for which they are to be constructed, and whose comfort and treatment are alone to be considered in such construction. The most important of these principles may be stated to be such a plan as will facilitate to the greatest degree, and render practicable at all times, the readiest and most thorough supervision of every department by the officers, careful selection of the best material for the construction, and the most unwearied attention to the proper arrangement of the different kinds of that material in the various parts of the building, that everything may not only be of the best quality, but put together in the best manner calculated to secure the purpose designed; the most systematic adaptation of every part to the wants and requirements of those who are to occupy the wards; ease and economy of administration; and ready and prompt distribution of heat, food and other articles constantly required, and special care that every part of the building shall have abundance of light and air.

While the greatest latitude may be allowed, in what may be termed the architectural arrangements, the plan which has been found to combine, in the greatest degree, all the points above enumerated is the lineal plan, in which each wing shall be opened to the full light at both ends, and the different wings shall be continued in the same line as that nearest the center, but falling back so far as to leave the second open at both ends, and so on through all the wings, in contradistinction to that plan which would place the second wing at right angles to the first, and so make the whole surround an included square. This plan was first fully elaborated and explained by Dr. Thos. S. Kirkbride, for so many years the able and accomplished superintendent and physician of the Pennsylvania Hospital for the insane, in Philadelphia, and has been adopted in the majority of hospitals for the insane erected within the last thirty years. While adhering strictly to this principle of construction many changes in interior detail and arrangement have been made by different persons, but these changes do not in any manner affect the original idea.

VI.—"All such buildings should be constructed of stone or brick, have slate or metallic roofs, and, as far as possible, be made secure from accidents by fire."

Circumstances connected with the locality of the building will often determine the fact of the use of stone or brick in the construction, but when stone is used it is always best and, in the end, most economical, to line the outer wall with brick with an air space of about three inches between the brick and the stone.

The brick should be well joined with or "tied into" the stone, at short distances, so as to make the brick secure and firm, and the space thus left between the walls will not only render the walls more dry and prevent the penetration of moisture, after a long continued driving storm, as is often seen in solid stone walls, but will also have the effect of making the building warmer in winter and colder in summer, from the fact that neither heat nor

cold can penetrate beyond the layer of air confined between the walls.

The same effect could also be obtained in the construction of brick walls in a similar manner and thus avoid what is so often required, the furring off or nailing strips of wood to the walls on which the lath is nailed. Lath and plaster partitions are always objectionable in parts of a hospital occupied by patients, from the ease with which they may be broken, and also from the fact that they furnish a more ready receptacle for rats, mice and vermin of various kinds. The wood used in furring off walls, and lath and plaster partitions are also objectionable from the fact that fire is easily started in them, and when so started is extremely difficult to trace or to extinguish. The objection to metal roofs in this climate arises from the injurious effects caused by the alternate expansion and contraction of heat and cold, the thermometer often falling twenty or more degrees in the course of a few hours; and in certain metals the constant tendency to rust, requires the frequent use of paint to preserve them from the corroding influence of heat and moisture.

Sufficient care is not generally exercised in preparing the sheathing of the roof on which the metal roof is to be laid, or for the slate.

The best plan is carefully to plane and plough and groove the boards, and have them laid as carefully as a floor. Slate, when properly laid on a roof, thus carefully prepared, furnishes the best material for roofing in a climate subject to so many changes in temperature.

The cornices of the roof should be made of the best galvanized iron and carefully backed up with brick.

The surest plan to avoid accidents by fire will be to have the whole interior constructed with brick partition walls, the floors made of brick arches between iron beams, and this arrangement carried through every part to and including the ceiling of the upper story directly under the roof, and the main division walls of brick carried up to the roof.

This practically renders the building fire proof, as the only part in any hall which could burn would be the floor, and if that is well laid, of good and thoroughly seasoned lumber, there will be the smallest chance for the fire to spread from one room to another. Every room is in effect a brick box.

But where this cannot be done, and in institutions already built, the best plan will be to introduce pipe connected with the tanks in the attic, or from an outside reservoir on high ground, into each ward, and have sufficient hose to carry the water to every part of the ward, and fire-plugs outside with hose of large size. An additional means of security, when the institution is heated by steam, will be to carry pipes into the attic of the center and different wings from the boiler, so that by opening a few valves, the whole attic could be filled with steam, in case a fire should break out, and it is well known that no better fire extinguisher can be found than an abundance of steam.

VII.—"Every hospital having provision for two hundred or more patients should have in it, at least, eight distinct wards for each sex, making sixteen classes in the entire establishment."

While this proposition says "at least eight distinct wards for each sex," it implies that a larger number would be advisable, and, as a general rule, it could and should be arranged so that a more thorough classification could be obtained in a larger number of wards.

This, in many cases, is very necessary for the comfort of patients and the greater success in treatment, so that those patients who were annoying to others and particularly to convalescent patients, may be removed from the wards for that class, and placed among those who could not be so much injured by their conduct or their manner of talking. It is well known to every superintendent, that there always is a certain class, generally quiet and free from excitement, and who can behave themselves very well, but who take special delight in retailing the most outrageous stories to all who come within their reach,

particularly to recent and convalescent patients; and, the impression thus produced on this class of patients is often very injurious and calculated to retard their restoration, if it does not throw them into a state of excitement or lead to more serious results.

The arrangements for classification should be such that all this class could be separated entirely from convalescents, and placed where they could have only those of a similar inclination with themselves to associate with, and less incentive therefore, to exercise their mischievous propensity. The subject is more fully stated in a proposition adopted in 1866, which reads thus:

"The facilities for classification or ward separation possessed by each institution, should equal the requirements of the different conditions of the several classes received by such institutions, whether those different conditions are mental or physical in their character."

VIII.—"Each ward should have in it a parlor, a corridor, single lodging rooms for patients, an associated dormitory communicating with a chamber for two attendants, a clothes room, a bath-room, a water-closet, a dining room, a dumb waiter and a speaking tube, leading to the kitchen, or other central part of the building."

The parlor should be so placed as to command the most pleasant outlook to be obtained, and should be of ample size so as to afford room for a piano, library, sofa and the other necessary furniture; and have as much light from windows as possible; and the whole front might easily be made to resemble a bay window by projecting the wall so far, in advance of the other walls, as to allow a window to be placed in the connecting wall on each side.

Everything about this parlor should be made bright and attractive by pictures and other ornaments, so as to induce the patients to spend as much time in it as possible; though when bay-windows are placed in a ward, they seem to be places of greater attraction.

The corridors should be made at least twelve feet wide

and twelve feet high in the ceiling and "no chamber for the use of a single patient should ever be less than eight by ten feet, nor should the ceiling of any story occupied by patients be less than twelve feet in height."

Where the wing immediately adjoining the center connects with it, a space of at least ten feet should be arranged with windows open on each side from floor to ceiling, so as to give abundance of light and air at that point, and these windows, like all the windows in the wards, should be protected with some ornamental form of guard to prevent intrusion by outsiders, and to prevent also the escape of the patients.

The omission of this open space makes that end of the hall dark, and at that point, also, the air will be very apt to be impure from the inability to obtain a free circulation.

It must be very distinctly kept in mind that every part of a hospital for the insane, occupied by patients, should be as bright and cheerful and have as much sunlight as it is possible to obtain by means of windows and openings at the ends of the hall. No hall can be made too bright and cheerful at all times; and even when the warm rays of the sun in summer require to be excluded, that can be done without interfering in any way with the cheerfulness and brightness of the wards.

The advantages of this abundance of light are twofold: In the first place, as a matter of health, and, then, as tending to promote greater cheerishness in all within the range of its influence; for it is a matter of common observation, that persons obliged to be in dark rooms become dull and depressed, while they are at the same time more blanched and unhealthy in appearance and in fact.

It has been objected to rooms on both sides of the hall that the effect will be to make the halls, if long, dark and gloomy, but if they have large windows from floor to ceiling at each end, with a large bay-window on each side in the center, no unpleasant gloom or darkness will be observed; and the bay-windows will give a very

pleasant sitting room which will be occupied nearly all the time by the patients, and will be a place where flowers, birds and other objects of interest may be kept. In the arrangement of the rooms in a ward, great care should be taken to have the door and window opposite, so that the bed may be placed to one side and out of the line of any drafts, which would be occasioned by opening the door and window.

Every room should be provided with a flue for the admission of warm air, and also one for the removal of foul air, so arranged, that no unpleasant draft from the warm air shall strike the person who may occupy the room; and, where a system of forced ventilation is used, this may readily be effected by having the warm air admitted above the level of the person's head, and the foul air removed at a lower point; but unless a strong power is used to keep up the circulation, this arrangement will not answer satisfactorily in practice, whatever excellencies may be claimed for it in theory.

The question of the particular arrangement of the window of the room must be left to the prevalent idea in any particular section.

There are really three different forms of window; one where both sashes are of iron and the upper is made to balance the lower, and when the lower is raised about five inches, the upper is lowered the same distance, by an arrangement of connecting chains and pulleys; another, where the upper sash is of cast iron and stationary, and the lower sash, hung with cords and weights, raises the whole distance, and a guard of an ornamental character protects the space opposite the lower sash so that the patient cannot fall out or jump out; and, the third form is where both sashes are of wood and hung by ropes and weights so as to move up and down, and the space outside is covered with a guard, either plain or ornamental.

The idea has been strenuously advanced by some that all guards to the windows and locks to the doors should

be dispensed with, which we believe to be most erroneous, and one of those extreme measures which will cure itself by the very state which it will induce, of remissness on the part of those in charge of the wards and of accidents and injuries to the patients. It is going from the extreme of care to the extreme of carelessness, and avoiding that which has always been found the safest, the mean between the two extremes. If the insane be irresponsible, as will be generally admitted, the effort to give them full liberty to go and come as they please, places them in a position attended with risk to themselves and to others; to themselves, because it places them in a position to be subjected to influences and temptations which will have a decidedly injurious influence, and to others by the risk to life, person and property at the caprice, ill-will or the delusions of an irresponsible party, and it is neither right nor just to expose the innocent and unsuspecting members of any community to any such risks.

It has been the fashion with many to insist on large associated dormitories, but we believe this to be contrary to the desire and habits of our people, who all insist on having a room to themselves. It is true that a hospital can be constructed more cheaply when the majority of the patients can be placed in associated dormitories, but there are many other things besides cheapness to be considered in the construction of a hospital for the insane, and chief among these are the comfort and welfare of the patients.

We have no sympathy, whatever, with that wretched sentiment, born of parsimony and disregard of the feelings and rights of others, which insists that the comfort, the welfare, the happiness and the restoration of the insane, of any class, are to be weighed in the balance with a few hundred dollars. The State is bound, in honor and duty, to make the very best provision for all its wards, and the more helpless and dependent, the greater care should be exercised in provision for them; and while proper economy should always be exercised in the disbursement of all

money, both in public and private undertakings of any kind, and every dollar should be strictly accounted for, no State nor any private corporation or association can afford to do wrong, for wrong in every form is wasteful expenditure, nor are any so poor that they cannot afford to provide for those who may be committed to their care, in that manner which will best promote the welfare of the insane in every way in their power. That cannot be done when the individual is placed in a position which injures his self-respect or is entirely at variance with all his previous habits and education. Men and women insist on some accommodation which will give them a degree of privacy, which cannot be obtained by being obliged to be in a large dormitory, and it will not do to say that because they are insane their feelings are not to be considered.

The effort in these days seems to be to lower the standard of self-respect and make people feel their dependency; but true humanity teaches that men, born in the image of God, should be trained to a proper regard for their high destiny, and that true charity consists in the dispensation of its gifts, in such a manner as to instill higher aims and more ennobling sentiments, and to lead all, of every class and condition, to seek that which will give true comfort in better and more enduring provision, for themselves and all within the sphere of their influence.

The principle which should govern in all cases is: "Whatsoever ye would that men should do to you, do ye even so to them;" and regard must also be had to the consideration which sooner or later comes home to every one in some form, that he or his may at some time require some such accommodation as a hospital for the insane affords, and he must consider how the plan of such association would suit his own case, or whether he would like some member of his family placed in such a position as has been indicated. Unfortunately this principle has too limited an application in governing bodies, and, particularly where the expenditure of money in public buildings

is involved, but that is no reason why it should continue to prevail, but, on the contrary, every dictate of justice and humanity demands that the sooner men in every relation of life do, as they would be done by, the better will mankind be.

There is still another consideration directly bearing on the patients themselves, that the proper degree of sleep at night, and that calm state which should precede and is necessary to sound sleep, cannot be had in nervous and restless patients in a room where a number sleep, for the reason that among that number, particularly, if it exceed six, there will always be one or more who are restless and uneasy and are apt to be up and about the room, to the annoyance of others and interference with their sleep; and unless the room is very well ventilated, the breath and other effluvia arising from a number of persons, soon vitiates the air so as to render it unpleasant and unhealthy.

The argument in favor of dormitories, that those inclined to suicide may be placed in them with greater safety and less probability of an attempt on their part to effect their purpose, has only a very limited application, and really, as a rule, does not effect the object.

The only preventive of suicide is careful and constant watchfulness by day and by night.

Every room of the kind should have a strong wire frame in the upper half of the door, so as to answer the double purpose of easy inspection and more efficient ventilation.

It is well known that associated dormitories are not used until it becomes a matter of necessity, and the fewer of them, and the more limited the number they can accommodate, the better for the patients themselves.

Where a dormitory of large size is used, the necessity of a chamber for two attendants communicating with it is requisite, in order that they may better minister to the patients in it, and prevent any disturbance, though, as a rule, if the attendants have attended to their duties during the day, they generally sleep so soundly, and they

should have their full sleep for the proper performance of their daily duties, that they hear very little that may occur during the night, unless of a very unusual character, and the real dependence must be on the activity and efficiency of the night watch, which in cases of special emergency would be increased for the time.

More thought and attention should be given to the room designed for the clothing of the patients in each ward than has usually been the case. It should be of ample size, well lighted and well ventilated, and placed in close proximity to the bath room, and should be conveniently arranged with closets and boxes in which the clothing can be neatly folded and arranged, with hooks for hanging up coats and various other articles; which are better hung up than folded and laid away. In addition to this there should be ample arrangements for the sheets and other bed clothing, with a convenient place in which hats and shoes may be placed by the men, instead of being allowed to lie promiscuously about the ward to the annoyance of all careful people, and the inevitable loss to those who wear them.

The bath-room should be conveniently arranged with an ample supply of hot and cold water, and should also be kept at a warm temperature in the coldest weather so that the most delicate may suffer no injury before entering or after leaving a bath. In immediate connection with the bath-room should be a wash room with stationary basins and an ample supply of water, to which the patients can have ready access at all times.

The arrangements of water closets are generally on too limited a scale, and it is best to place in every ward at least two hoppers, so that there may not be any excuse for careless habits on the part of the patients, by inability to obtain the needed accommodation.

While such improvements have been made, and are still making, in the arrangement for these conveniences, it is not requisite that any special plan should be insisted on further than that "all water closets should, as far as

possible, be made of indestructible material, be simple in their arrangements and have a strong downward ventilation connected with them," and, also, that "the floors should be made of material that will not absorb moisture."

The dining room should be of such size as to give comfortable sitting room for all who may occupy the ward, should be bright and airy, and should have connected with it, a neat china closet, where all the articles used on the tables can be kept in neat order; and in it a sink with hot and cold water attached, in which the plates, dishes and all articles used on the table can be washed.

The dumb-waiter should be conveniently located in connection with the dinning room, and the apparatus for hoisting it should be such as to involve the least labor and trouble, and easy communication afforded with the kitchen by means of a speaking tube or, as may now be very satisfactorily arranged, by telephone.

IX.—"No apartment should ever be provided for the confinement of patients, or as their lodging rooms, which are not entirely above ground."

The requirement of this proposition would appear superfluous, but it seems needful in these days when the effect is made to cheapen things to the very lowest point, and endeavor to make provision for a certain class of the insane in a manner, which is not in strict accordance with that proper regard for their comfort and welfare which their position imperatively demands, and also to place, so far as words and a protest can do it, a barrier to any further efforts in that direction.

X.—"No class of rooms should ever be constructed without some kind of window in each, communicating directly with the external atmosphere," and this, for the reason before stated, that every patient should have the benefit of sunlight to as great a degree as possible, and a better opportunity can be afforded for the freest admission of fresh air, which in many rooms is absolutely requisite to insure cleanliness.

The eleventh proposition has been already considered in connection with the size of the rooms to be used for patients.

XII.—"The floors of the patients' apartments should always be of wood." It would seem scarcely necessary to insist on this requirement, but as stone and brick floors have been used in the past, and are exceptionally cold and uncomfortable, particularly for that class who would be most probably compelled to occupy such rooms; there might be those who would consider it a good thing to do, to return to such a state of affairs in the future, on the ground that wooden floors would rot out by frequent scrubbing, and it would be economy to prevent such expenditure.

Wooden floors may be rendered nearly, if not quite, impervious to all fluids by an application of boiled oil, applied hot, so as to saturate the floor, and having this repeated every few months.

XIII.—"The stairways should always be of iron, stone or other indestructible material, ample in size and number, and easy of access to afford convenient egress in case of accident from fire." Every ward should have, at least, two stairways, one at each end, leading directly to the ground, both front and rear, so that, by opening the doors the patients could readily be taken out to the ground around the building. The stairways must be of iron, stone or slate, and walled into a brick wall on each side, so that they shall be virtually fire-proof from top to bottom—all the landings being of the same material as the stairs.

Circumstances peculiar to the location of the hospital will probably determine the character of the material to be used, as in some localities one of the articles named may be obtained at a more reasonable price than others. Slate forms really the neatest and pleasantest stairway to travel over, as it is less noisy when trodden on, and experience has shown that it wears very little by constant treading over it.

Unless care is taken to have the iron slightly roughened on the top of the step, it will in time become smooth

and slippery, and the same may be said of certain kinds of stone—but it does not hold good in slate. In these days when so much is said about fire-escapes from public buildings, it is wisest and best to construct the stairway in such a manner as to be virtually a fire-escape from all the wards. This can readily be done in the manner indicated above, and then should a fire unfortunately take place, the inmates can all readily be removed by the mode of egress to which they have been accustomed.

Any fixture outside, such as is usually constructed, is worse than useless, for very few patients would venture on them, and they would be very likely to be used by mischievous persons, for the purpose of annoying the patients.

For females such outside fixtures would be utterly impracticable; whereas, a stairway constructed of either of the materials named, and well built into a brick wall, would be perfectly safe and secure, and very easily available at all times, and free from every objection which could be urged against outside fixtures.